

NOTES ON THE BIOLOGY AND MORPHOLOGY OF *HESPERILLA SARNIA* ATKINS (LEPIDOPTERA: HESPERIIDAE)

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Abstract

Hesperilla sarnia Atkins is recorded breeding on *Scleria laevis* Retz (Cyperaceae). Egg, larval and pupal descriptions are given, together with comments on adult morphology.

Introduction

Hesperilla sarnia Atkins is a dark brown skipper known from several localities in Queensland between Townsville in the north to Palmwoods in the south (Common and Waterhouse 1981), and collected more recently by the authors on hilltops west of Paluma in northern Queensland. The life history, except for the eggs, has previously been unknown.

Atkins (1978) commented on wing maculation differences between the only two females known at that time, one from southern Queensland and the other from central Queensland. The finding of the immature stages and the rearing and collecting of several males and females from Mt. Stuart, (near Townsville), northern Queensland, as well as the collecting of a further female from Blackdown Tableland, Expedition Range, central Queensland has enabled the description of the life history and has provided additional material for the study of variations in the maculation of adult females.

Life History

FOOD PLANT. *Scleria laevis* Retz, family Cyperaceae.

EGG. Pale yellow, hemispherical, 1 mm high with 22 vertical ribs.

LARVA.

First instar 4-10 mm long, head shining black, body pale green with prothoracic and anal plates pink.

Second to final instar (Figs 1, 2), 14-33 mm long, body pale translucent green in early instars becoming purple in final instar. Prothoracic and anal plates pink brown. A variable area of pink suffusion over segments 6-9 and at the junctions of body segments. Dorsolateral and lateral white lines extending the length of the body but obscured posteriorly by the pink suffusion. Head (Fig. 2) dark brown with cream stripes extending from frons up to occipital margin; frontoclypeus fawn coloured.

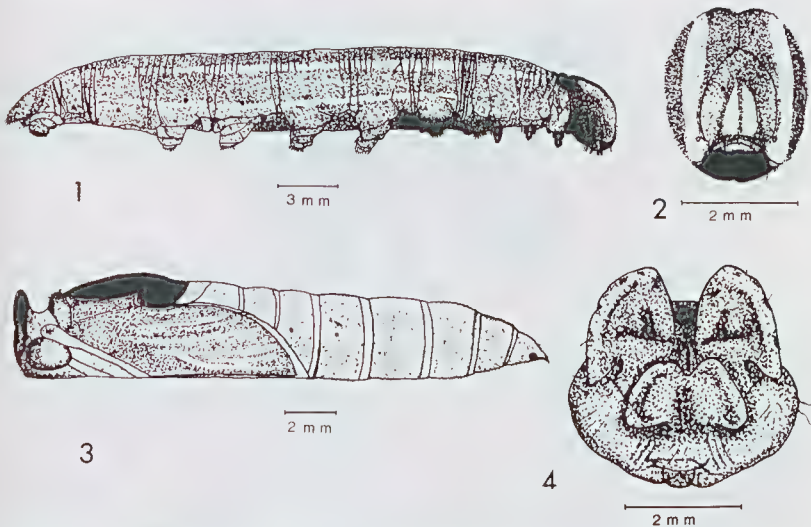
PUPA (Figs 3, 4).

Length 19-23 mm, pale green with darker green thorax and wing cases, and posterior segments densely covered with stiff brown setae. Pupal cap

(Fig. 4) dark brown with an angular projection at the frons and dorsally bearing two crenulate, semicircular projections pointed ventrally.

Notes

On Mt. Stuart, the host plant occurs locally on exposed granite slopes. Larvae and pupae are found in characteristic shelters in plants growing in sheltered situations adjacent to large rocks or under encroaching *Lantana camara* L. bushes. *H. sarnia* occurs together with the closely related *H. malindeva* Lower, and both species are found breeding together, but on different food plants, the larvae of *H. malindeva* being restricted to an unidentified species of *Gahnia* growing in the same situations.



Figs 1-4. Life history of *Hesperilla sarnia* Atkins: (1) mature larva; (2) head of final instar larva; (3) pupa, lateral view; (4) pupal cap.

West of Paluma adult males of *H. sarnia* fly close to the ground on the summits of steep hills together with males of *H. malindeva* and *H. crypsigramma* (Meyrick and Lower).

Adult males from northern Queensland agree closely with the published description of *H. sarnia* (Atkins 1978) and there appears to be little variation in their form. Amongst females, however, there is considerable variation in the arrangement of the hyaline spots on the fore wing. A series of six females from Mt. Stuart appear closest to the female from Palmwoods cited in the type series in that, in addition to the two submedian spots between M_3 and CuA_1 , and CuA_1 and CuA_2 , they have two well defined subapical spots between R_4 and R_5 , and R_5 and M_1 respectively, as well as

a spot above the anal vein. Three of these females each have an additional spot in the cell, and one of them (Fig. 5) has a series of three subapical spots, the additional one lying between R_3 and R_4 .

A female from Blackdown Tableland, Expedition Range, central Queensland is similar to the female from that location cited in the type series, in that the fore wing maculation is reduced to two submedian spots, one between M_3 and CuA_1 and the other between CuA_1 and CuA_2 .

Whether this observed difference between females of the different populations is a constant feature is uncertain and confirmation must await the collection of further specimens from throughout the range of the species.



Fig. 5. Adult female from Mt. Stuart Townsville, Queensland.

Identification of females within this group can be difficult and until genitalic studies are performed, the arrangement of the hyaline spots on the fore wing is the most reliable means of identification of the individual species. It is hoped that with this knowledge of the variation within females of *H. sarnia*, specimens from northern areas may be more easily identified.

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References

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